

STAT

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SH&G

December 1, 1983
13155

Central Intelligence Agency
New Building Project Office
Room 4E50
CIA Headquarters Building
Washington, DC 20505

STAT

Attention:

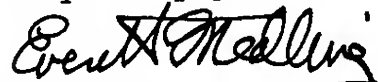
Re: Final Chiller Bid Package
Log 317

Gentlemen:

Transmitted herewith is one photoready copy and one photocopy of the entire bid package for the chillers.

This specification is based upon using five chillers of 1600 tons each as we recently agreed.

Very truly yours,



Wm. Everett Medling, AIA
Project Manager

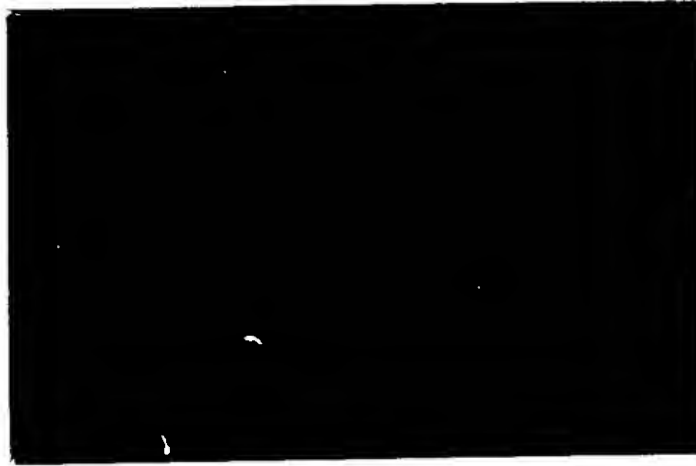
WEM:clm
Enclosures

Smith, Hinchman & Grylls Associates, Inc.

455 West Fort Street Detroit, Michigan 48226 313/964-3000 810/221-9463 Telex
Architects Engineers Planners
A Member of The Smith Group Inc.

SH&G

Smith, Hinchman & Grylls Associates, Inc.
Architects Engineers Planners



SH&G 13155 BP-3SC
CENTRAL INTELLIGENCE AGENCY
HEADQUARTERS EXPANSION
BID PACKAGE 3SC
SUPPLY CONTRACT - CHILLERS

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7	4)	PROJECT MANUAL
7	5)	FOR
7	6)	BID PACKAGE 3SC
	7)	SUPPLY CONTRACT - CHILLERS
7	8)	FOR
7	9)	HEADQUARTERS EXPANSION
	10)	CENTRAL INTELLIGENCE AGENCY
	11)	WASHINGTON, D.C.
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7	29)	SMITH, HINCHMAN & GRYLLS ASSOCIATES, INC.
	30)	ARCHITECTS - ENGINEERS - PLANNERS
	31)	455 WEST FORT STREET
	32)	DETROIT, MICHIGAN 48226
7	33)	PROJECT NO. 13155 BP-3SC
	34)	DECEMBER 1, 1983

***END OF SECTION

CENTRAL INTELLIGENCE AGENCY
HEADQUARTERS EXPANSION
BID PACKAGE 3SC
SUPPLY CONTRACT - CHILLERS

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7	10)	00033ATTA	ATTACHMENT 'A' TO STANDARD FORM 33
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7	12)	00033M	+MODIFICATION TO STANDARD FORM 33
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7	30)	DIVISION 15 - MECHANICAL	
7	31)	15600	CHILLERS
7	32)	+ - DOCUMENT TO BE INSERTED BY GSA.	

***END OF SECTION

7 2)
12 3) ATTACHMENT 'A'
4) TO SF33
5) (CHILLERS)
7 6)
7 7) CONTRACT GS-11C-.....
7 8) BIDDER'S NAME:
7 9)
7 10) 1. BID PRICE FOR FIVE CHILLERS, F.O.B. PROJECT SITE, INCLUDING
11) INSTALLATION SUPERVISION, START-UP SERVICES AND TRAINING
12) OF GOVERNMENT OPERATORS:
7 13) DOLLARS
7 14) (\$.....)
7 15) THE BIDDER AFFIRMS THAT THE BID PRICE INCLUDES COSTS FOR THE
16) FOLLOWING ITEMS:
7 17) START-UP SERVICES AT A MINIMUM OF FIVE MAN-DAYS PER
18) CHILLER.
7 19) TRAINING OF GOVERNMENT OPERATORS AT A MINIMUM OF THREE
20) MAN-DAYS PER CHILLER.
7 21) 2. DELIVERY SCHEDULE
7 22) IN ACCORDANCE WITH SECTION 01310.
7 23) 3. PAYMENT SCHEDULE
7 24) TENTATIVE DATE NO. OF UNIT PRICE PRICE
25) OF BENEFICIAL UNITS PRICE EXTENSION
26) ACCEPTANCE
27) -----
7 28) APRIL 1, 1985 TWO \$..... \$.....
7 29) APRIL 1, 1986 THREE \$..... \$.....
7 30)
7 31) 4. DATE BY WHICH BIDDER MUST RECEIVE APPROVED SHOP DRAWINGS,
32) PRODUCT DATA AND RELATED SUBMITTALS IN ORDER TO MEET
33) SPECIFIED DELIVERY DATE:
7 34) 1984.

***END OF SECTION

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1	1)	1. DEFINITIONS
2	2)	THE CONTRACT DOCUMENTS
3	3)	THE CONTRACT DOCUMENTS CONSIST OF THE SUPPLY CONTRACT (BETWEEN THE
	4)	GOVERNMENT AND THE CONTRACTOR), THE CONDITIONS OF THE CONTRACT
	5)	(GENERAL AND SUPPLEMENTAL PROVISIONS, SPECIAL CONDITIONS, AND RELATED
	6)	DOCUMENTS), THE DRAWINGS, THE SPECIFICATIONS, AND ALL ADDENDA ISSUED
	7)	PRIOR TO AND ALL CHANGES ISSUED AFTER EXECUTION OF THE CONTRACT.
	8)	CHANGES ARE DEFINED IN CLAUSE NO. 2 OF THE GENERAL PROVISIONS.
2	9)	THE PROJECT
3	10)	THE PROJECT IS THE TOTAL CONSTRUCTION OF WHICH THE SUPPLIES FURNISHED
	11)	UNDER THE CONTRACT DOCUMENTS ARE A PART.
2	12)	THE ARCHITECT
3	13)	THE ARCHITECT IS:
7	14)	SMITH, HINCHMAN & GRYLLS ASSOCIATES, INC.
	15)	455 WEST FORT STREET
	16)	DETROIT, MICHIGAN 48226
3	17)	THE TERM "ARCHITECT" MEANS THE ARCHITECT OR HIS AUTHORIZED
	18)	REPRESENTATIVE.
2	19)	THE CONTRACTOR
3	20)	THE CONTRACTOR IS THE INDIVIDUAL, PARTNERSHIP, JOINT VENTURE, OR
	21)	CORPORATION NAMED IN THE SUPPLY CONTRACT, REFERRED TO FROM TIME TO
	22)	TIME, AS "SUPPLY CONTRACTOR", FOR PURPOSES OF CLARIFICATION.
2	23)	THE INSTALLING CONTRACTOR

DATE 11/30/83 TIME 20.175

SPECIAL CONDITIONS

(SUPPLY CONTRACT)

SH&G 13155 BP-3SC
CENTRAL INTELLIGENCE AGENCY
HEADQUARTERS EXPANSION
BID PACKAGE 3SC
SUPPLY CONTRACT - CHILLERS

24) THE INSTALLING CONTRACTOR IS THE ORGANIZATION WHOSE CONTRACT WITH THE
25) GOVERNMENT FOR WORK ON THE PROJECT INCLUDES RESPONSIBILITY FOR
26) RECEIVING, TRANSPORTING AFTER RECEIPT, STORING AS APPROPRIATE AND
27) INSTALLING THE SUPPLIES. THE INSTALLING CONTRACTOR WILL BE THE
28) CONTRACTOR FOR BID PACKAGE 3 - POWERHOUSE.

29) BENEFICIAL ACCEPTANCE

30) BENEFICIAL ACCEPTANCE FOR ANY ITEM OF SUPPLIES IS THE DATE THE
31) GOVERNMENT PLACES THAT ITEM IN USE FOR ITS INTENDED PURPOSE,
32) SUBSEQUENT TO ONSITE OPERATION FOR START-UP AND TESTING.

33) MISCELLANEOUS DEFINITIONS

34) THE TERM "SUPPLIES" SHALL BE READ TO INCLUDE, WITHOUT LIMITATION,
35) RAW MATERIALS, COMPONENTS INTERMEDIATE ASSEMBLIES AND END PRODUCTS TO
36) BE FURNISHED UNDER THE CONTRACT. (REFER TO CLAUSE NO. 5 OF THE GENERAL
37) PROVISIONS).

38) THE TERM "PER" MEANS "IN ACCORDANCE WITH THE REQUIREMENTS OF".

39) THE TERM "AS APPROVED" MEANS "OR EQUAL" AS DESCRIBED IN ARTICLE
40) NO. 32 OF THE GSA SUPPLEMENTAL PROVISIONS.

41) 2. NONPUBLICITY

42) IT IS A SPECIFIC CONDITION OF THE CONTRACT THAT THE CONTRACTOR SHALL NOT
43) USE OR ALLOW TO BE USED ANY ASPECT OF THIS AGREEMENT FOR PUBLICITY OR
44) ADVERTISEMENT PURPOSES.

45) IT IS FURTHER UNDERSTOOD THAT THIS OBLIGATION SHALL NOT EXPIRE UPON
46) COMPLETION OR TERMINATION OF THE CONTRACT BUT WILL CONTINUE INDEFINITELY.

47) THE CONTRACTOR MAY REQUEST A WAIVER OR RELEASE FROM THE FOREGOING BUT
48) SHALL NOT DEVIATE THEREFROM UNLESS SO AUTHORIZED IN WRITING BY THE
49) GOVERNMENT.

50) 3. BIDDING REQUIREMENTS

51) BIDDER SHALL ENTER IN SECTION 00033ATTA, "ATTACHMENT 'A' TO SF33
52) (CHILLERS)", ALL INFORMATION REQUESTED. REFER TO STANDARD FORM 33-A.

53) BID PRICE SHALL BE A LUMP SUM FOR DELIVERY OF THE SPECIFIED SUPPLIES
54) F.O.B. PROJECT SITE BY THE DATE SPECIFIED IN SECTION 01310, "SCHEDULE
55) AND TIME OF COMPLETION", AND SHALL INCLUDE ALL COSTS ASSOCIATED WITH
56) THE SPECIFIED START-UP SERVICES AND TRAINING OF GOVERNMENT OPERATORS.

57) THE BIDDER SHALL AFFIRM IN HIS BID THAT THE BID PRICE INCLUDES
58) COSTS FOR THE AFOREMENTIONED START-UP SERVICES AND TRAINING OF
59) GOVERNMENT OPERATORS AT THE RESPECTIVE NUMBER OF MAN-DAYS STATED IN
60) ATTACHMENT 'A' TO SF33 FOR EACH FUNCTION.

61) RESPECTIVE UNIT PRICE AMOUNTS ENTERED UNDER THE PAYMENT SCHEDULE SHALL
62) REFLECT THE SPECIFIED REQUIREMENT THAT WARRANTIES SHALL, IN EACH CASE,
63) BEGIN ON THE DATE OF BENEFICIAL ACCEPTANCE. THE TOTAL OF THE PRICE
64) EXTENSIONS SHALL EQUAL THE BID PRICE.

65) IN ESTABLISHING DATE BY WHICH BIDDER MUST RECEIVE SHOP DRAWINGS,
66) PRODUCT DATA AND RELATED SUBMITTALS IN ORDER TO MEET THE SPECIFIED
67) DELIVERY DATE, BIDDER SHALL CONSIDER THE FACT THAT FOR EACH SUBMITTAL,
68) ARCHITECT WILL REQUIRE 14 CALENDAR DAYS FROM DATE SUBMITTAL ENTERS
69) ARCHITECT'S OFFICE UNTIL THE SUBMITTAL LEAVES TO RETURN TO THE
70) CONTRACTOR.

4. FOREIGN OWNERSHIP CONTROL OR INFLUENCE

71) VENDORS RESPONDING TO THIS REQUEST FOR PROPOSAL (RFP) ARE ADVISED THAT IT IS THE GOVERNMENT'S INTENT TO SECURE SERVICES OR EQUIPMENT FROM FIRMS WHICH ARE NOT UNDER FOREIGN OWNERSHIP, CONTROL, OR INFLUENCE (FOCI) OR WHERE ANY FOCI MAY, IN THE OPINION OF THE GOVERNMENT ADVERSELY IMPACT ON GOVERNMENT SECURITY REQUIREMENTS. ACCORDINGLY, ALL FIRMS RESPONDING TO THIS RFP OR INITIATING PERFORMANCE OF A CONTRACT ARE REQUIRED TO SUBMIT A DOD FORM 441S (CERTIFICATE PERTAINING TO FOREIGN INTERESTS) WITH THEIR PROPOSAL OR PRIOR TO CONTRACT PERFORMANCE (AS APPROPRIATE). DOD FORM 441S ENTRIES SHALL SPECIFY, WHERE NECESSARY, THE IDENTITY, NATURE, DEGREE, AND IMPACT OF ANY FOCI ON THEIR ORGANIZATION OR ACTIVITIES.

82) NOTWITHSTANDING THE LIMITATION ON CONTRACTING WITH A VENDOR UNDER FOCI IDENTIFIED ABOVE, THE GOVERNMENT RESERVES THE RIGHT TO CONTRACT WITH SUCH FIRMS UNDER APPROPRIATE ARRANGEMENTS, WHEN IT DETERMINES THAT SUCH CONTRACTS WILL BE IN THE BEST INTEREST OF THE GOVERNMENT.

5. ADMINISTRATION OF THE CONTRACT

86) THE GOVERNMENT

88) THE CONTRACT WILL BE ADMINISTERED BY THE CONTRACTING OFFICER ON BEHALF OF THE UNITED STATES OF AMERICA (REFERRED TO THROUGHOUT THE CONTRACT DOCUMENTS AS THE GOVERNMENT).

91) THE ARCHITECT

92) THE ARCHITECT, (AS REQUIRED BY SEPARATE CONTRACT) UNDER SUPERVISION OF THE GOVERNMENT, WILL, AS PERTINENT TO THIS SUPPLY CONTRACT:

94) PROVIDE REVIEW AND APPROVAL OF ALL SHOP DRAWINGS, PRODUCT DATA, SAMPLES, SCHEDULES, ETC., SUBMITTED BY THE CONTRACTOR.

96) REVIEW AND CERTIFY THE VALIDITY OF THE CONTRACTOR'S APPLICATIONS FOR PAYMENT.

98) COMMUNICATIONS

99) THE CONTRACTOR SHALL FORWARD ALL COMMUNICATIONS TO THE ARCHITECT THROUGH THE CONTRACTING OFFICER.

6. LIQUIDATED DAMAGES

102) REFER TO ARTICLE 11 - DEFAULT, OF THE GENERAL PROVISIONS. REDESIGNATE PARAGRAPHS 11(F) AND 11(G) THERIN AS 11(G) AND 11(H) RESPECTIVELY, AND INSERT THE FOLLOWING:

(F) (I) IN THE EVENT THE GOVERNMENT EXERCISES ITS RIGHT OF TERMINATION AS PROVIDED IN PARAGRAPH (A) ABOVE, THE CONTRACTOR SHALL BE LIABLE TO THE GOVERNMENT FOR EXCESS COSTS AS PROVIDED IN PARAGRAPH (B) ABOVE AND, IN ADDITION, FOR LIQUIDATED DAMAGES, IN THE AMOUNT OF \$500.00 AS FIXED, AGREED, AND LIQUIDATED DAMAGES FOR EACH CALENDAR DAY OF DELAY, UNTIL SUCH TIME AS THE GOVERNMENT MAY REASONABLY OBTAIN DELIVERY OF SIMILAR SUPPLIES OR PERFORMANCE OF SIMILAR SERVICES.

(II) IF THE CONTRACT IS NOT SO TERMINATED, NOTWITHSTANDING DELAY, AS PROVIDED IN PARAGRAPH (A) ABOVE, THE CONTRACTOR SHALL CONTINUE PERFORMANCE AND BE LIABLE TO THE GOVERNMENT FOR SUCH LIQUIDATED DAMAGES FOR EACH CALENDAR DAY OF DELAY UNTIL THE SUPPLIES ARE DELIVERED OR SERVICES PERFORMED.

7 120) (III) THE CONTRACTOR SHALL NOT BE LIABLE FOR LIQUIDATED
121) DAMAGES FOR DELAYS DUE TO CAUSES WHICH WOULD RELIEVE
122) HIM FROM LIABILITY FOR EXCESS COSTS AS PROVIDED IN PARA-
123) GRAPH (C) OF THIS CLAUSE.

1 124) 7. WARRANTIES AND GUARANTIES

2 125) WARRANTY

3 126) THE CONTRACTOR WARRANTS TO THE GOVERNMENT THAT ALL SUPPLIES FURNISHED
127) UNDER THIS CONTRACT WILL BE NEW UNLESS OTHERWISE SPECIFIED, AND THAT
128) ALL WORK WILL BE OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN
129) CONFORMANCE WITH THE CONTRACT DOCUMENTS. ALL WORK NOT CONFORMING TO
130) THESE REQUIREMENTS, INCLUDING SUBSTITUTIONS NOT PROPERLY APPROVED AND
131) AUTHORIZED, MAY BE CONSIDERED DEFECTIVE. IF REQUIRED BY THE CONTRACT
132) DOCUMENTS OR THE CONTRACTING OFFICER, THE CONTRACTOR SHALL FURNISH
133) SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF SUPPLIES
134) FURNISHED. THIS WARRANTY IS NOT LIMITED BY THE PROVISIONS FOR
135) CORRECTION OF DEFECTIVE OR NON-CONFORMING WORK HEREIN.

2 136) CORRECTION OF DEFECTS

3 137) IF, WITHIN ONE YEAR AFTER BENEFICIAL ACCEPTANCE BY THE OWNER OF
138) DESIGNATED SUPPLIES OR WITHIN SUCH LONGER PERIOD OF TIME AS MAY BE
139) PRESCRIBED BY LAW OR BY THE TERMS OF ANY APPLICABLE SPECIAL WARRANTY
140) REQUIRED BY THE CONTRACT DOCUMENTS, ANY SUPPLIES ARE FOUND TO BE
141) DEFECTIVE OR NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE
142) CONTRACTOR SHALL MAKE CORRECTION PROMPTLY AFTER RECEIPT OF A WRITTEN
143) NOTICE FROM THE GOVERNMENT TO DO SO, UNLESS IN THE PUBLIC INTEREST THE
144) GOVERNMENT CONSENTS TO ACCEPT SUCH SUPPLIES WITH AN APPROPRIATE
145) ADJUSTMENT IN CONTRACT PRICE. THIS OBLIGATION SHALL SURVIVE
146) TERMINATION OF THE CONTRACT.

2 147) PRIOR TO FINAL PAYMENT, SUBMIT TO THE CONTRACTING OFFICER A WARRANTY FOR
148) EACH GROUP OF SUPPLIES DIFFERENTIATED BY A WARRANTY PERIOD (DIFFERING
149) STARTING AND ENDING DATES). EACH WARRANTY SHALL BE IN TRIPLICATE IN THE
150) FORM SHOWN IN SECTION D0110A, "APPENDIX 'A' WARRANTY".

1 151) 8. LAWS, ORDINANCES AND REGULATIONS

2 152) THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL
153) LAWS, ORDINANCES, AND REGULATIONS, AND SHALL REQUIRE SUCH COMPLIANCE, BY
154) ALL OTHER PERSONS WITH WHOM HE SHALL ENTER INTO ANY CONTRACT PERTAINING
155) TO THE WORK. THE CONTRACTOR SHALL BE LIABLE FOR AND INDEMNIFY AND HOLD
156) HARMLESS THE GOVERNMENT, AND THE ARCHITECT AND THEIR RESPECTIVE
157) CONSULTANTS, AGENTS AND EMPLOYEES FROM ANY AND ALL LIABILITY OR DAMAGE
158) ARISING BY REASON OF THE BREACH OF THE PROVISIONS HEREIN SET FORTH.

2 159) IT IS NOT THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE CERTAIN THAT THE
160) CONTRACT DOCUMENTS ARE IN ACCORDANCE WITH APPLICABLE LAWS, ORDINANCES AND
161) REGULATIONS. HOWEVER, IF THE CONTRACTOR OBSERVES THAT ANY OF THE CONTRACT
162) DOCUMENTS ARE AT VARIANCE THEREWITH IN ANY RESPECT, HE SHALL PROMPTLY
163) NOTIFY THE CONTRACTING OFFICER AND ANY NECESSARY CHANGES SHALL BE
164) ACCOMPLISHED BY APPROPRIATE CHANGE ORDER.

2 165) IF THE CONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO SUCH
166) LAWS, ORDINANCES, AND REGULATIONS, AND WITHOUT SUCH NOTICE TO THE
167) CONTRACTING OFFICER, HE SHALL ASSUME FULL RESPONSIBILITY THEREFOR AND
168) SHALL BEAR ALL COSTS ATTRIBUTABLE THERETO.

9. PATENT INDEMNITY

1 169)
2 170) REFER TO CLAUSE NO. 39 OF THE SUPPLEMENTAL PROVISIONS. EDIT INTERNALLY AS
171) FOLLOWS:
3 172) FOLLOWING THE WORD "EMPLOYEES" IN THE FIRST SENTENCE, INSERT THE
173) PHRASE "AND THE ARCHITECT, AND HIS CONSULTANTS, AGENTS AND
174) EMPLOYEES".

10. INSURANCE

1 175)
2 176) PROPERTY INSURANCE
3 177) THE CONTRACTOR SHALL PURCHASE AND MAINTAIN PROPERTY INSURANCE FOR THE
178) FULL CONTRACT VALUE THEREOF UPON SUPPLIES FOR WHICH ANY PAYMENT HAS
179) BEEN MADE AND SUPPLIES WHICH HAVE BEEN DELAYED IN SHIPMENT AT THE
180) GOVERNMENT'S REQUEST.
3 181) THE CONTRACTOR SHALL FILE TWO CERTIFIED COPIES OF ALL POLICIES WITH
182) THE CONTRACTING OFFICER BEFORE EXPOSURE TO LOSS CAN OCCUR. IF THE
183) GOVERNMENT IS DAMAGED BY THE FAILURE OF THE CONTRACTOR TO MAINTAIN
184) SUCH INSURANCE AND TO SO NOTIFY THE CONTRACTING OFFICER, THEN THE
185) CONTRACTOR SHALL BEAR ALL REASONABLE COSTS PROPERLY ATTRIBUTABLE
186) THERETO.
2 187) TRANSIT INSURANCE
3 188) THE CONTRACTOR SHALL PURCHASE AND MAINTAIN DURING SHIPMENT TRANSIT
189) INSURANCE FOR THE FULL CONTRACT VALUE THEREOF UPON SUPPLIES FOR WHICH
190) ANY PAYMENT HAS BEEN MADE.

11. SUCCESSORS AND ASSIGNS

1 191)
2 192) THE GOVERNMENT AND THE CONTRACTOR EACH BINDS ITSELF, ITS PARTNERS,
193) SUCCESSIONS, ASSIGNS AND LEGAL REPRESENTATIVES TO THE OTHER PARTY HERETO
194) AND TO THE PARTNERS, SUCCESSIONS, ASSIGNS AND LEGAL REPRESENTATIVES OF
195) SUCH OTHER PARTY IN RESPECT TO ALL COVENANTS, AGREEMENTS AND OBLIGATIONS
196) CONTAINED IN THE CONTRACT DOCUMENTS. NEITHER PARTY TO THE CONTRACT SHALL
197) ASSIGN THE CONTRACT OR SUBLET IT AS A WHOLE WITHOUT THE WRITTEN CONSENT
198) OF THE OTHER.

12. WRITTEN NOTICE

1 199)
2 200) WRITTEN NOTICE SHALL BE DEEMED TO HAVE BEEN DULY SERVED IF DELIVERED IN
201) PERSON TO THE INDIVIDUAL OR MEMBER OF THE FIRM OR ENTITY OR TO AN OFFICER
202) OF THE CORPORATION FOR WHOM IT WAS INTENDED, OR IF DELIVERED AT OR SENT
203) BY REGISTERED OR CERTIFIED MAIL TO THE LAST BUSINESS ADDRESS KNOWN TO HIM
204) WHO GIVES THE NOTICE.

13. CLAIMS FOR DAMAGES

1 205)
2 206) SHOULD EITHER PARTY TO THE CONTRACT SUFFER INJURY OR DAMAGE TO PERSON OR
207) PROPERTY BECAUSE OF ANY ACT OR OMISSION OF THE OTHER PARTY OR OF ANY OF
208) HIS EMPLOYEES, AGENTS OR OTHERS FOR WHOSE ACTS HE IS LEGALLY LIABLE,
209) CLAIM SHALL BE MADE IN WRITING TO SUCH OTHER PARTY WITHIN A REASONABLE
210) TIME AFTER THE FIRST OBSERVANCE OF SUCH INJURY OR DAMAGE.

DATE 11/30/83 TIME 20.175

SPECIAL CONDITIONS

(SUPPLY CONTRACT)

CENTRAL INTELLIGENCE AGENCY

HEADQUARTERS EXPANSION

BID PACKAGE 3SC

SUPPLY CONTRACT - CHILLERS

1 211)

14. RIGHTS AND REMEDIES

2 212) THE DUTIES AND OBLIGATIONS IMPOSED BY THE CONTRACT DOCUMENTS AND THE
213) RIGHTS AND REMEDIES AVAILABLE THEREUNDER SHALL BE IN ADDITION TO AND NOT
214) A LIMITATION OF ANY DUTIES, OBLIGATIONS, RIGHTS AND REMEDIES OTHERWISE
215) IMPOSED OR AVAILABLE BY LAW.

2 216) NO ACTION OR FAILURE TO ACT BY THE CONTRACTING OFFICER, ARCHITECT OR
217) CONTRACTOR SHALL CONSTITUTE A WAIVER OF ANY RIGHT OR DUTY AFFORDED ANY OF
218) THEM UNDER THE CONTRACT, NOR SHALL ANY SUCH ACTION OR FAILURE TO ACT
219) CONSTITUTE AN APPROVAL OF OR ACQUIESCENCE IN ANY BREACH THEREUNDER,
220) EXCEPT AS MAY BE SPECIFICALLY AGREED IN WRITING.

1 221)

15. ASSIGNMENT OF CONTRACT

2 222) THE GOVERNMENT RESERVES AND IS HEREBY GRANTED THE RIGHT TO ASSIGN THIS
223) CONTRACT TO THE INSTALLING CONTRACTOR AND MAKE IT A PART OF THE CONTRACT
224) FOR BID PACKAGE 3. THE SUPPLY CONTRACTOR AGREES THAT, WHEN SUCH
225) ASSIGNMENT IS MADE, HE WILL WORK UNDER THE INSTALLING CONTRACTOR IN THE
226) SAME MANNER AS HE WOULD HAD THE CONTRACT BEEN ORIGINALLY AWARDED TO HIM
227) BY THE INSTALLING CONTRACTOR, AND THAT HE WILL BE BOUND TO AND ASSUME
228) TOWARD THE INSTALLING CONTRACTOR ALL THE OBLIGATIONS AND RESPONSIBILITIES
229) THAT HE, BY HIS CONTRACT, ASSUMES TOWARD THE GOVERNMENT. IN CASE OF
230) ASSIGNMENT, PAYMENTS TO THE SUPPLY CONTRACTOR WILL BE BY THE INSTALLING
231) CONTRACTOR.

***END OF SECTION

7 1)

T

12 2) WARRANTY
7 3)
7 4) PROJECT TITLE AND LOCATION
7 5)
7 6)
7 7) GOVERNMENT CONTRACT NUMBER
7 8) ARCHITECT PROJECT NUMBER/
9) CONTRACT IDENTIFIER
7 10) CONTRACTOR PROJECT NUMBER
7 11) WARRANTED SUPPLIES
7 12)
7 13) SPECIFICATION SECTION AND
14) LINE NUMBER REFERENCE
7 15) LENGTH OF WARRANTY (YEARS)
7 16) CONTRACTOR
7 17) SUBCONTRACTOR
2 18) THE UNDERSIGNED HERewith WARRANT THAT THE ABOVE SUPPLIES HAVE BEEN
19) MANUFACTURED IN CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT
20) DOCUMENTS FOR THE PROJECT/CONTRACT NAMED AND WARRANT SAID SUPPLIES TO
21) PERFORM WITHOUT FAILURE AS SPECIFIED FOR THE ABOVE STATED PERIOD OF TIME
7 22) STARTING ON 198..... AND ENDING ON198.....
2 23) THIS WARRANTY DOES NOT APPLY TO FAILURE TO PERFORM DUE TO ABUSE OR
24) NEGLIGENCE BY THE GOVERNMENT OR OTHERS OR DAMAGE BY VANDALISM.
2 25) SUBCONTRACTOR (IF APPLICABLE):
7 26) SIGNED
7 27)
7 28) TITLE
7 29) NOTARY
7 30) DATE
7 31) CONTRACTOR:
7 32) SIGNED
7 33)
7 34) TITLE
7 35) NOTARY
7 36) DATE

***END OF SECTION

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2	4)	MILESTONE DATES
7	5)	INVITATION FOR BIDS FEBRUARY 1, 1984.
7	6)	BID OPENING MARCH 1, 1984.
7	7)	CONTRACT AWARD APRIL 1, 1984.
7	8)	NOTICE TO PROCEED APRIL 1, 1984.
7	9)	DELIVERY OF FIVE CHILLERS NOVEMBER 1, 1984.
7	10)	TENTATIVE BENEFICIAL
	11)	ACCEPTANCE OF TWO
	12)	CHILLERS APRIL 1, 1985.
7	13)	TENTATIVE BENEFICIAL
	14)	ACCEPTANCE OF THREE
	15)	CHILLERS APRIL 1, 1986.

***END OF SECTION

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- 1 1) 1. GENERAL
- 2 2) REFER TO SECTION 01340A, "APPENDIX 'A' - GOVERNMENT'S REVIEW STAMP".
- 3 3) WITH FIRST SUBMISSION OF SHOP DRAWINGS, ETC., FURNISH TO CONTRACTING
- 4 4) OFFICER FOUR RUBBER STAMPS IN THE FORM SHOWN IN APPENDIX 'A'. FAILURE TO
- 5 5) FURNISH THESE STAMPS MAY BE CAUSE FOR REJECTION OF THE SUBMITTED
- 6 6) MATERIAL.
- 2 7) SCHEDULE SHOP DRAWING, PRODUCT DATA AND SAMPLE SUBMITTALS FOR
- 8 8) INTER-RELATED ITEMS AT THE SAME TIME.
- 2 9) SHOP DRAWINGS SUBMITTED WHICH ARE NOT REQUIRED BY THE SPECIFICATIONS OR
- 10 10) THE CONTRACTING OFFICER WILL BE RETURNED WITH NO COMMENT.
- 1 11) 2. DESCRIPTIONS AND SUBMITTALS
- 2 12) MODEL NUMBERS, RATINGS, PERFORMANCE CHARACTERISTICS AND OTHER PERTINENT
- 13 13) DATA SHALL BE CLEARLY MARKED AND IDENTIFIED ON SUBMITTALS. INFORMATION
- 14 14) PERTAINING TO SEVERAL SIZES OR GRADES OF ONE CLASSIFICATION OF SUPPLIES
- 15 15) OR TO SEVERAL COMPONENTS OF A SPECIFIC SYSTEM, SHALL BE BOUND TOGETHER
- 16 16) AND CLEARLY IDENTIFIED. EQUIPMENT OR PRODUCT, SHALL BE BOUND TOGETHER AND
- 17 17) CLEARLY IDENTIFIED. WHERE PRINTED MATERIALS DESCRIBE MORE THAN ONE
- 18 18) PRODUCT OR MODEL, CLEARLY IDENTIFY WHICH IS TO BE FURNISHED.
- 2 19) SHOP DRAWINGS
- 3 20) SHOP DRAWINGS ARE DRAWINGS, DIAGRAMS, SCHEDULES AND OTHER DATA
- 21 21) SPECIALLY PREPARED FOR THE WORK BY THE CONTRACTOR OR ANY
- 22 22) SUBCONTRACTOR, MANUFACTURER, SUPPLIER OR DISTRIBUTOR TO ILLUSTRATE
- 23 23) SOME PORTION OF THE WORK.
- 3 24) SUBMIT SHOP DRAWINGS IN THE FORM OF ONE REPRODUCIBLE TRANSPARENCY AND
- 25 25) TWO COPIES (PRINTED FROM THE TRANSPARENCY). DO NOT SEND MORE THAN THE
- 26 26) SPECIFIED NUMBER OF COPIES. ADDITIONAL COPIES WILL BE DISCARDED.
- 4 27) TRANSPARENCIES SHALL HAVE AN UNOBSTRUCTED SPACE AT THE RIGHT SIDE
- 28 28) OR BOTTOM OF SIZE NOT LESS THAN 6 INCHES BY 3 INCHES FOR APPROVAL
- 29 29) STAMPS AND DOCUMENT CONTROL NUMBERING.
- 4 30) TRANSPARENCIES OF THE SAME ITEM OR SYSTEM SHALL BE OF UNIFORM SIZE
- 31 31) AND BE NUMBERED CONSECUTIVELY.
- 2 32) PRODUCT DATA
- 3 33) PRODUCT DATA ARE ILLUSTRATIONS, STANDARD SCHEDULES, PERFORMANCE CHARTS
- 34 34) AND TEST DATA, INSTRUCTIONS, BROCHURES, DIAGRAMS AND OTHER INFORMATION
- 35 35) FURNISHED BY THE CONTRACTOR TO ILLUSTRATE AN ITEM OR ELEMENT OF
- 36 36) MATERIAL, EQUIPMENT OR SYSTEM FOR SOME PORTION OF THE WORK.
- 3 37) SUBMIT PRODUCT DATA (GENERALLY 8-1/2 BY 11 INCH SIZE) IN THE FORM OF
- 38 38) THREE, CLEAR, TOTALLY REPRODUCIBLE COPIES MADE BY REPRODUCTIVE MEANS
- 39 39) ON 8-1/2 BY 14 INCH (LEGAL SIZE) PAPER. THE 3 BY 8-1/2 INCH SPACE
- 40 40) RESULTING FROM THE USE OF LEGAL SIZE PAPER SHALL BE LEFT UNOBSTRUCTED
- 41 41) FOR APPROVAL STAMPS AND NOTATIONS.
- 3 42) PRODUCT DATA THAT CANNOT BE SUBMITTED IN REPRODUCIBLE FORM, SUCH AS
- 43 43) PAINT COLOR CARDS, SHALL BE SUBMITTED IN FIVE COPIES.

DATE 11/23/83 TIME 17.929

SHOP DRAWINGS, PRODUCT DATA

AND SAMPLES

SH&G 13155 BP-3SC

CENTRAL INTELLIGENCE AGENCY

HEADQUARTERS EXPANSION

BID PACKAGE 3SC

SUPPLY CONTRACT - CHILLERS

2 44) SAMPLES

3 45) SAMPLES ARE PHYSICAL EXAMPLES WHICH ILLUSTRATE MATERIALS, EQUIPMENT OR
46) WORKMANSHIP AND ESTABLISH STANDARDS BY WHICH THE WORK WILL BE JUDGED.3 47) SUBMIT SAMPLES IN TRIPLICATE UNLESS DIFFERENT NUMBER IS SPECIFIED,
48) TRANSPORTATION CHARGES PREPAID, WITH IDENTIFYING LABEL FIRMLY
49) ATTACHED.4 50) LABELS SHALL BE OF A SIZE TO RECEIVE APPROVAL STAMPS AND NOTATIONS,
51) IN ADDITION TO THE IDENTIFYING INFORMATION SPECIFIED BELOW.

2 52) TITLE BLOCK

3 53) IN ADDITION TO CONTRACTOR'S, SUBCONTRACTOR'S AND MANUFACTURER'S OR
54) SUPPLIER'S IDENTIFYING AND APPROVAL INDICATIONS, SHOP DRAWINGS,
55) PRODUCT DATA AND LABELS FOR SAMPLES SHALL HAVE IDENTIFYING TITLE
56) BLOCKS. TITLE BLOCKS SHALL CONTAIN:

4 57) PROJECT TITLE.

4 58) NAME OF CONTRACT.

4 59) GOVERNMENT'S CONTRACT NUMBER.

4 60) ARCHITECT'S NAME AND PROJECT NUMBER INCLUDING CONTRACT IDENTIFIER.

4 61) ADDRESS (SECTION AND LINE NUMBERS) IN THE SPECIFICATION SECTION OF
62) THE REQUIRED SUBMITTAL.

4 63) DATE OF INITIAL SUBMITTAL.

4 64) CONTROL NUMBER.

2 65) NOTE:

3 66) SHOP DRAWINGS NOT SUBMITTED IN THE FORM OF REPRODUCIBLE TRANSPARENCIES
67) WILL NOT BE ACCEPTED FOR REVIEW.3 68) PRODUCT DATA NOT SUBMITTED IN THE FORM OF REPRODUCIBLE COPIES WILL NOT
69) BE ACCEPTED FOR REVIEW, EXCEPT PRODUCT DATA SPECIFICALLY EXEMPTED FROM
70) THE REPRODUCIBLE COPIES REQUIREMENT.3 71) SHOP DRAWINGS, PRODUCT DATA AND SAMPLES NOT BEARING THE CONTRACTOR'S
72) STAMP OF APPROVAL WILL NOT BE ACCEPTED FOR REVIEW.3 73) SHOP DRAWINGS, PRODUCT DATA AND SAMPLES SUBMITTED WITHOUT SPECIFIED
74) SPACE FOR APPROVAL STAMPS WILL NOT BE ACCEPTED FOR REVIEW.3 75) SAMPLES WHICH ARRIVE WITHOUT THE TRANSPORTATION CHARGES PREPAID WILL
76) NOT BE ACCEPTED FOR REVIEW.3 77) THE FIRST TWO SUBMITTALS OF EACH SHOP DRAWING OR PRODUCT DATA WILL BE
78) PROCESSED WITHOUT COST TO THE CONTRACTOR. BEGINNING WITH THE THIRD
79) SUBMITTAL THE GOVERNMENT MAY CHARGE THE CONTRACTOR FOR THE COST OF
80) SUCH SUBSEQUENT PROCESSING OF SHOP DRAWINGS AND PRODUCT DATA UNLESS AN
81) APPROVED CHANGE ORDER IS ISSUED AFFECTING THE SHOP DRAWINGS AND
82) PRODUCT DATA.

3. TRANSMITTAL AND APPROVAL

- 1 83)
- 2 84) TRANSMITTAL
- 3 85) TRANSMIT SHOP DRAWINGS, PRODUCT DATA AND SAMPLES USING TRANSMITTAL
86) FORMS FURNISHED BY THE GOVERNMENT. FILL OUT TRANSMITTAL FORM.
- 4 87) INCOMPLETE OR ERRONEOUS TRANSMITTALS WILL BE RETURNED WITHOUT
88) ACTION.
- 4 89) PORTIONS OF TRANSMITTAL FORM WILL BE COMPLETED BY THE GOVERNMENT.
- 3 90) RESUBMITTAL PROCEDURE SHALL FOLLOW SAME PROCEDURE AS THE INITIAL
91) SUBMITTAL.
- 2 92) APPROVAL
- 3 93) GOVERNMENT'S STAMP ON CONTRACTOR'S SUBMITTAL CHECKED "APPROVED"
94) (CODE NO. 1), OR "APPROVED AS NOTED" (CODE NO. 2). APPROVAL DOES NOT
95) AUTHORIZE CHANGES TO CONTRACT SUM UNLESS STATED IN SEPARATE LETTER OR
96) CHANGE ORDER.
- 3 97) UPON RECEIPT OF "APPROVED" OR "APPROVED AS NOTED" SUBMITTALS, MAKE
98) NECESSARY COPIES FOR DISTRIBUTION TO PARTIES REQUIRING THE APPROVED
99) INFORMATION.
- 2 100) DISAPPROVAL
- 3 101) GOVERNMENT'S STAMP CHECKED "REVISE AND RESUBMIT" (CODE NO. 3), OR
102) "NOT APPROVED" (CODE NO. 4). RESUBMIT CORRECTED COPIES FOR FINAL
103) APPROVAL. CORRECTION SHALL BE LIMITED TO ITEMS MARKED.
- 3 104) THE DISAPPROVAL OF SHOP DRAWINGS, PRODUCT DATA AND SAMPLES OR DELAY IN
105) SUBMITTING OR RESUBMITTING SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
106) SHALL NOT BE DEEMED CAUSE FOR AN EXTENSION OF TIME.
- 2 107) THE GOVERNMENT MAY HOLD SHOP DRAWINGS, PRODUCT DATA AND SAMPLES IN CASES
108) WHERE PARTIAL SUBMITTAL CANNOT BE REVIEWED UNTIL THE COMPLETE SUBMITTAL
109) HAS BEEN RECEIVED OR WHERE SUCH SUBMITTAL CANNOT BE REVIEWED UNTIL
110) ASSOCIATED ITEMS HAVE BEEN RECEIVED. WHEN SUCH SUBMITTALS ARE HELD BY THE
111) GOVERNMENT, IT WILL SO ADVISE THE CONTRACTOR IN WRITING.

***END OF SECTION

Section 01340A - Appendix 'A' **Government's Submittals Review Stamp**

3"

Date Received			
Document Control No.			
General Services Administration Smith, Hinchman & Grylls Associates, Inc. Architects Engineers Planners			
Reviewing is only for conformance with the design concept of the work and compliance with the information given in the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the site; for information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; and for coordination of the work of all trades.			
Highest Number Prevails			Code
Approved			1
Approved as Noted			2
Revise and Resubmit			3
Not Approved - Resubmit			4
Dept.	Chkd.By	Date	Code
Arch.			
Struct.			
Mech.			
Elect.			
Civil			
Security			

7"

ARTICLE	INDEX	LINE
1.	DELIVERY	1
2.	UNLOADING AND POSSESSION	6
***END OF INDEX		

1	1)	1. DELIVERY
2	2) ALL DELIVERIES TO THE PROJECT FOR ALL CONTRACTS WILL BE ACCORDING TO 3) PRECISE SCHEDULES.	
2	4) PLAN AND EXECUTE DELIVERIES OF THE SUPPLIES ACCORDING TO THE SCHEDULE 5) WORKED OUT WITH THE INSTALLING CONTRACTOR.	
1	6)	2. UNLOADING AND POSSESSION
2	7) CONTRACTOR'S AUTHORIZED REPRESENTATIVE SHALL BE PRESENT AT ALL TIMES OF 8) ARRIVAL OF THE SUPPLIES AT THE PROJECT SITE, SHALL OBSERVE THE WORK OF 9) UNLOADING, AND SHALL CERTIFY TO THE CONTRACTING OFFICER, IN WRITING, THAT 10) THE SUPPLIES WERE UNLOADED WITHOUT DAMAGE, IF SUCH IS TRUE.	
2	11) POSSESSION OF THE SUPPLIES SHALL PASS FROM THE CONTRACTOR TO THE 12) INSTALLING CONTRACTOR AT MOMENT WHEN INSTALLING CONTRACTOR BEGINS TO MAKE 13) ATTACHMENTS FOR UNLOADING.	
2	14) POSSESSION BY INSTALLING CONTRACTOR SHALL IN NO WAY DIMINISH THE SUPPLY 15) CONTRACTOR'S RESPONSIBILITY FOR PROPER PERFORMANCE OF THE SUPPLIES IN THE 16) ABSENCE OF DAMAGE CAUSED BY INSTALLING CONTRACTOR'S OPERATIONS.	

***END OF SECTION

ARTICLE	INDEX	LINE
	CENTRAL LIQUID CHILLER REFRIGERATION MACHINES	1
***END OF INDEX		

- | | | |
|---|-----|---|
| 1 | 1) | CENTRAL LIQUID CHILLER REFRIGERATION MACHINES |
| 2 | 2) | FURNISH FIVE (5) CENTRIFUGAL LIQUID CHILLER UNITS, WITH SPECIFIED |
| | 3) | ACCESSORIES; CHILLER MANUFACTURER'S SHALL BE: YORK, CARRIER OR TRANE. |
| 2 | 4) | FOR OPERATING ECONOMY, THE CHILLERS SHALL BE CAPABLE OF STARTING AND |
| | 5) | OPERATING AT MINIMUM LOAD WITH THE ENTERING CONDENSER WATER TEMPERATURE |
| | 6) | AT LEAST AS LOW AS 55 DEG. F. |
| 2 | 7) | CHILLER PERFORMANCE SHALL BE RATED IN ACCORDANCE WITH THE AIR |
| | 8) | CONDITIONING AND REFRIGERATION INSTITUTE (ARI) STANDARD 550; AMERICAN |
| | 9) | NATIONAL STANDARDS INSTITUTE (ANSI) B9.1 AND B31.5, LATEST EDITIONS. |
| 2 | 10) | EACH UNIT SHALL BE A COMPLETE FACTORY PACKAGE INCLUDING A CENTRIFUGAL |
| | 11) | COMPRESSOR, OPEN OR HERMETIC MOTOR, COMPRESSOR MOTOR STARTER, COOLER, |
| | 12) | CONDENSER AND PURGE OR PUMPOUT UNIT. UNIT SHALL BE FACTORY ASSEMBLED, |
| | 13) | PIPED, WIRED AND LEAK TESTED. IF THE MANUFACTURER DOES NOT PROVIDE A UNIT |
| | 14) | AS A COMPLETE FACTORY PACKAGE, THE INSTALLING CONTRACTOR WILL FURNISH THE |
| | 15) | NECESSARY LABOR AND MATERIAL TO COMPLETE THE ASSEMBLY WITH THE |
| | 16) | SUPERVISION OF THE MANUFACTURER'S REPRESENTATIVE. MANUFACTURER OF CHILLER |
| | 17) | SHALL HAVE A FACTORY MAINTAINED SERVICE ORGANIZATION AND REPAIR PARTS |
| | 18) | STOCK WITHIN A 50 MILE RADIUS. ALL COMPONENTS SHALL BE PROVIDED WITH |
| | 19) | LIFTING EYES. |
| 2 | 20) | EVAPORATOR AND CONDENSER SHALL BE OF SHELL AND TUBE TYPE DESIGN IN |
| | 21) | ACCORDANCE WITH REQUIREMENTS OF THE ASME CODE FOR UNFIRED PRESSURE |
| | 22) | VESSELS. REFRIGERANT SIDE SHALL BE PROOF-TESTED PER APPLICABLE CODE OR AT |
| | 23) | 1.5 TIMES MAXIMUM DESIGN WORKING PRESSURE BUT NOT LESS THAN 45 PSIG. A |
| | 24) | SAFETY RUPTURE DISC IN ACCORDANCE WITH ANSI/ASHRAE 15-1978 SAFETY CODE |
| | 25) | SHALL BE PROVIDED FOR THE REFRIGERANT CIRCUIT. |
| 2 | 26) | EACH TUBE SHALL BE INTEGRAL, EXTERNALLY FINNED, 3/4-INCH NOMINAL |
| | 27) | DIAMETER, .045 INCH WALL THICKNESS, SEAMLESS COPPER WITH SMOOTH LANDS AT |
| | 28) | ALL TUBE SUPPORTS. TUBES SHALL BE INDIVIDUALLY REPLACEABLE WITH TUBE ENDS |
| | 29) | ROLLED INTO ANNULAR GROOVES IN THE TUBE SHEETS. EACH EVAPORATOR TUBE |
| | 30) | SHALL BE ROLLED INTO THE INTERMEDIATE SUPPORT SHEETS. |
| 2 | 31) | WATER BOXES SHALL BE DESIGNED FOR 150 PSIG MAXIMUM WORKING PRESSURE. |
| | 32) | WATER SIDE SHALL BE HYDROSTATICALLY TESTED AT 1.5 TIMES WORKING PRESSURE. |
| | 33) | WATER BOXES SHALL BE OF THE MARINE STYLE, WITH COVERS REMOVABLE WITHOUT |
| | 34) | DISTURBING PIPING. CONDENSER AND CHILLED WATER BOX COVERS SHALL ALSO BE |
| | 35) | HINGED. TAPS FOR VENTS AND DRAINS SHALL BE PROVIDED. |
| 2 | 36) | EVAPORATOR SHALL HAVE ELIMINATORS INSTALLED ALONG ITS COMPLETE LENGTH |
| | 37) | ABOVE THE TUBES TO PREVENT LIQUID REFRIGERANT FROM ENTERING THE |
| | 38) | COMPRESSOR. |
| 2 | 39) | LIQUID REFRIGERANT ENTERING EVAPORATOR SHALL BE DISTRIBUTED UNIFROMLY THE |
| | 40) | ENTIRE LENGTH OF SHELL AND WITHOUT DIRECT IMPINGEMENT OF HIGH VELOCITY |
| | 41) | REFRIGERANT ON TUBES. |
| 2 | 42) | FOR STANDARD WATER SELECTIONS, MINIMUM ALLOWABLE REFRIGERANT TEMPERATURE |
| | 43) | SHALL BE 34 F. AT THE DESIGN CONDITIONS HEREINAFTER SPECIFIED. |
| 2 | 44) | RELIEF DEVICES SHALL BE PROVIDED FOR THE REFRIGERANT SIDE, IN ACCORDANCE |
| | 45) | WITH ANSI B9.1 SAFETY CODE AND LOCAL CODE. MULTIPLE RELIEF DEVICES SHALL |
| | 46) | BE BROUGHT TO A COMMON VENT CONNECTION. |
| 2 | 47) | COMPRESSOR SHALL BE OF THE CENTRIFUGAL TYPE, DIRECT OR GEAR-DRIVEN. |
| | 48) | MAXIMUM SPEED FOR GEAR-DRIVEN MACHINES SHALL BE 7000 RPM. |

49) COMPRESSOR IMPELLERS SHALL BE HIGH STRENGTH ALUMINUM ALLOY, BALANCED BOTH
50) STATICALLY AND DYNAMICALLY. IMPELLER SHALL BE PROOF-TESTED AT LEAST 15
51) PERCENT ABOVE DESIGN OPERATING SPEED.

52) COMPRESSOR ASSEMBLY SHALL BE RUN-TESTED AT THE FACTORY. VIBRATION SHALL
53) NOT EXCEED 1.0 MIL AT THE COMPRESSOR HOUSING.

54) CAPACITY CONTROL SHALL BE BY VARIABLE INLET GUIDE VANES, CAPABLE OF
55) MODULATING PERFORMANCE FROM 10 PERCENT TO 100 PERCENT RATED UNIT CAPACITY
56) AT DESIGN CONDITIONS. MINIMUM CAPACITY OF 10 PERCENT SHALL BE ATTAINED
57) WITHOUT SURGING OR ADJUSTING REFRIGERANT CHARGE. AUTOMATIC HOT GAS
58) BYPASS, IF REQUIRED, SHALL BE PROVIDED TO ALLOW OPERATION AT 10 PERCENT
59) LOAD. MINIMUM CONDENSER WATER TEMPERATURE IS TO BE 55 DEGREES F.

60) MOTOR SHALL BE CONTINUOUS DUTY, SQUIRREL CAGE INDUCTION TYPE, AND SHALL
61) HAVE AN OPEN DRIP-PROOF OR HERMETIC DESIGN ENCLOSURE. MOTOR FULL-LOAD
62) AMPERES (FLA) AT DESIGN CONDITIONS SHALL NOT EXCEED MOTOR NAMEPLATE FLA.
63) MOTOR SHALL BE FACTORY MOUNTED AND ALIGNED WITH THE COMPRESSOR. MOTOR
64) SHALL BE DESIGNED FOR USE WITH THE TYPE STARTER SPECIFIED.

65) A POSITIVE DISPLACEMENT SUBMERGED OIL PUMP SHALL PROVIDE LUBRICATION TO
66) ALL PARTS REQUIRING OIL. PROVISIONS SHALL BE INCLUDED FOR CONTROLLED
67) HEATING OF OIL. HEATER SHALL BE SELECTED TO MAINTAIN OIL AT 150 DEGREES
68) F. DURING SHUT-DOWN TO MINIMIZE AFFINITY FOR REFRIGERANT. THE OIL PUMP
69) SHALL BE SUITABLE FOR OPERATION ON 120-VOLT SINGLE PHASE POWER. THIS
70) POWER SHALL BE SUPPLIED THROUGH THE CONTROL POWER TRANSFORMER.

71) THE UNIT MANUFACTURER SHALL PROVIDE A FULLY AUTOMATIC, FACTORY INSTALLED
72) OIL RETURN SYSTEM TO REMOVE THE OIL FROM THE LIQUID REFRIGERANT DURING
73) CHILLER OPERATION. THE OIL RETURN SYSTEM SHALL CONTINUOUSLY MAINTAIN THE
74) PROPER OIL LEVEL IN THE COMPRESSOR OIL SUMP AND PREVENT THE COLLECTION OF
75) OIL IN THE EVAPORATOR.

76) LUBRICATION SYSTEM SHALL BE PROVIDED WITH TWO HIGH OIL TEMPERATURE
77) CUTOUTS: ONE IN THE BEARING OIL OUTLET AND ONE IN THE OIL PUMP DISCHARGE.

78) A REFRIGERANT OR WATER COOLED OIL COOLER SHALL BE PROVIDED. EXTERNAL
79) WATER SOURCE TO BE CHILLED WATER. IF THE OIL COOLER IS WATER COOLED THE
80) INSTALLING CONTRACTOR WILL FURNISH AND INSTALL NECESSARY AUXILIARY WATER
81) PIPING, VALVES AND CONTROLS TO THE OIL COOLER. COMPLETE LUBRICATION
82) SYSTEM SHALL BE FACTORY INSTALLED AND PIPED.

83) MOTOR WINDING TEMPERATURE SENSORS SHALL BE LOCATED IN THE MOTOR WINDING
84) OF EACH PHASE OF COMPRESSOR MOTORS. SENSORS SHALL INDEPENDENTLY STOP THE
85) COMPRESSOR MOTOR IF EXCESSIVE TEMPERATURE IS SENSED IN ANY OF THE THREE
86) WINDINGS. A FULL SET OF SPARE SENSORS SHALL BE PROVIDED WITH WIRING TO
87) CONTROL PANEL.

88) LOW VOLTAGE AND SINGLE-PHASE PROTECTION (PHASE FAILURE) SHALL BE PROVIDED
89) BY MEANS OF AN ANSI NO. 47 SEQUENCE VOLTAGE RELAY.

90) UNITS THAT OPERATE AT SUB-ATMOSPHERIC PRESSURE (R-11, R-113, R-114) SHALL
91) BE PROVIDED WITH A COMPLETE PURGE UNIT, PROVIDING POSITIVE MEANS FOR
92) COLLECTION, RETURN OF REFRIGERANT AND REMOVAL OF NON-CONDENSABLES. A
93) SIGNAL LIGHT ON THE CONTROL CENTER SHALL BE PROVIDED WHICH WILL ALERT THE
94) OPERATOR AT OCCURRENCE OF EXCESSIVE PURGING, INDICATING AN ABNORMAL AIR
95) LEAK INTO THE UNIT.

96) PURGE UNIT SHALL BE PROVIDED WITH THE FOLLOWING:

97) SIGHT GLASS OIL LEVEL INDICATOR.

98) ELECTRICALLY HEATED OIL SEPARATOR.

99) SECTIONALIZED DRUM PERMITTING SEPARATION OF NONCONDENSABLE
100) GASES AND WATER FROM DISCHARGE OF COMPRESSOR PURGE.

- 7 101) MEANS FOR RETURNING REFRIGERANT TO EVAPORATOR AND FOR
102) DRAWING OFF NONCONDENSABLES.
- 7 103) SOLENOID VALVE TO AUTOMATICALLY ISOLATE PURGE SYSTEM
104) FROM CENTRIFUGAL MACHINE WHEN PURGE COMPRESSOR IS NOT
105) IN OPERATION.
- 7 106) WATER CONNECTIONS TO ALLOW OPERATION OF THE PURGE
107) SYSTEM WHEN CENTRIFUGAL MACHINE IS NOT IN OPERATION.
- 2 108) UNITS THAT OPERATE ABOVE 15 PSIG (R12, R-22, R-500) SHALL BE PROVIDED
109) WITH A SEPARATE COMPRESSOR OPERATED TRANSFER UNIT AND SEPARATE STORAGE
110) RECEIVER TO PERMIT REMOVAL AND ISOLATION OF THE FULL REFRIGERANT CHARGE
111) ALLOWING INTERNAL INSPECTION OF THE CONDENSER, EVAPORATOR AND CENTRIFUGAL
112) COMPRESSOR. THE STORAGE RECEIVER SHALL BE ASME CODE CONSTRUCTED AND
113) STAMPED, AND FURNISHED WITH ANSI B9.1 SAFETY CODE AND LOCAL CODE. PUMPOUT
114) SYSTEM SHALL BE SUPPLIED AND WARRANTED BY THE CENTRIFUGAL MACHINE
115) MANUFACTURER. IT SHALL BE PRE-PIPED AND PRE-WIRED COMPLETE WITH FUSED
116) DISCONNECT, STARTER AND CONTROLS HOUSED IN A NEMA 1 ENCLOSURE. EACH UNIT
117) SHALL HAVE ITS OWN COMPLETE PUMP-OUT SYSTEM. THE INSTALLING CONTRACTOR
118) WILL FURNISH AND INSTALL NECESSARY AUXILIARY WATER PIPING AND VALVES TO
119) TRANSFER UNIT CONDENSER.
- 2 120) EACH CHILLER SHALL BE EQUIPPED WITH AN ELECTRIC CONTROL PANEL AND INCLUDE
121) THE FOLLOWING.
- 3 122) THREE-PHASE ELECTRONIC CURRENT LIMITING WITH INDIVIDUAL CURRENT
123) TRANSFORMERS.
- 4 124) ELECTRONIC CURRENT LIMITER SHALL LIMIT THE MAXIMUM AMPERAGE DRAWN
125) BY THE COMPRESSOR MOTOR BY MONITORING ALL THREE PHASES OF SUPPLY
126) POWER. THE INLET GUIDE VANES SHALL MODULATE IN RESPONSE TO THE
127) MAXIMUM AMPERAGE DRAWN BY ANY ONE OF THE THREE PHASES.
- 4 128) CONTINUOUS VARIABLE POSITION DEMAND LIMITER SHALL PERMIT MANUAL
129) CONTROL OF POWER DEMAND AT ALL OPERATING POINTS FROM 40 TO 100
130) PERCENT OF FULL LOAD POWER.
- 3 131) CAPACITY CONTROL
- 4 132) SELF-CONTAINED ELECTRIC TEMPERATURE CONTROL SYSTEM, INCLUDING
133) TEMPERATURE SENSOR, VANE ACTUATOR AND INTEGRATED CIRCUIT SOLID
134) STATE CONTROLS.
- 4 135) PRECISE CONTROL OF DEADBAND RANGE SHALL BE FIELD ADJUSTABLE FROM
136) PLUS OR MINUS 1/4 DEG. F TO PLUS OR MINUS 1-1/2 DEG. F.
- 4 137) UNIT SHALL INCLUDE A MANUAL FOUR-POSITION (HOLD, LOAD, UNLOAD OR
138) AUTOMATIC) DIAGNOSTIC SWITCH FOR EASE OF MAINTENANCE.
- 4 139) INDIVIDUAL LIGHTS SHALL INDICATE WHEN MACHINE IS LOADING,
140) UNLOADING, OR IF AUTOMATIC CURRENT LIMITING IS OCCURRING.
- 4 141) LOW REFRIGERANT TEMPERATURE OVERRIDE TO AUTOMATICALLY CLOSE THE
142) GUIDE VANES AND STOP THE COMPRESSOR IF LOW REFRIGERANT TEMPERATURE
143) IS DETECTED.
- 4 144) A METHOD TO MAINTAIN CAPACITY INLET GUIDE VANES IN CLOSED POSITION
145) DURING COMPRESSOR START-UP.
- 4 146) AN ADJUSTABLE ANTIRECYCLE TIMER TO ENSURE 30-MINUTE INTERVAL
147) BETWEEN SUCCESSIVE COMPRESSOR MOTOR STARTS. TIMER TO BE ACTIVATED
148) AT "START".
- 4 149) INDIVIDUAL, FRONT ADJUSTABLE GAUGES TO INDICATE CONDENSER,
150) EVAPORATOR, OIL AND PURGE DRUM PRESSURES. GAUGES SHALL BE ORIFICED
151) TO PREVENT EXCESSIVE SENSITIVITY AND MOVEMENT OF GAUGE INDICATORS.

- 4 152) TIMER TO PROVIDE OPERATION OF OIL PUMP DURING PRELUBE AND POST-LUBE
153) CYCLES.
- 4 154) SWITCH TO PERMIT MANUAL OR AUTOMATIC OPERATION OF THE PURGE SYSTEM.
- 4 155) THE FOLLOWING SAFETY CONTROLS SHALL BE WIRED IN THE MAIN CONTROL
156) POWER CIRCUIT TO THE STARTER: LOW EVAPORATOR TEMPERATURE, HIGH
157) CONDENSER PRESSURE, HIGH MOTOR TEMPERATURE, HIGH LUBE OIL
158) TEMPERATURE AND LOW OIL PRESSURE CONTROLS SHALL BE WIRED TO
159) INDEPENDENTLY STOP THE COMPRESSOR MOTOR. ADDITIONALLY, EACH OF
160) THESE CONTROLS SHALL BE WIRED THROUGH A FAULT TRIP INDICATOR TO
161) PROVIDE A DOUBLE BREAK OF ALL SAFETY LOCKOUT SYSTEMS. METHOD TO
162) PROVIDE FIRST-OUT INDICATION OF FAULT SHALL BE PROVIDED. MANUAL
163) RESET OF THE FAULT TRIP INDICATOR SHALL BE REQUIRED.
- 4 164) ONE ADDITIONAL NORMALLY CLOSED ALARM CONTACT (CONVERTIBLE TO
165) NORMALLY OPEN CONTACTS ON EACH FAULT TRIP INDICATOR) TO ALLOW
166) REMOTE ANNUNCIATION OF ANY OF THE FOLLOWING CONDITIONS: LOW
167) EVAPORATOR TEMPERATURE, HIGH CONDENSER PRESSURE, HIGH MOTOR
168) TEMPERATURE, LOW OIL PRESSURE AND ELECTRICAL OVERLOAD.
- 4 169) A 4160/120 VOLT TRANSFORMER SHALL SUPPLY 120-VOLT POWER SUPPLIES
170) INDIVIDUALLY FUSED TO SERVE: CONTROL CIRCUIT, OIL PUMP SYSTEM
171) CIRCUIT, OIL HEATER CIRCUIT AND PURGE CIRCUIT.
- 4 172) FACTORY INSTALLED CONTROL PANEL LIGHTS TO INDICATE SEQUENTIAL
173) START-UP AND OPERATION OF THE CHILLER, INCLUDING: SAFETIES,
174) SATISFIED, COOLING REQUIRED, RESTART TIME ELAPSED, CHILLED WATER
175) PUMP, CONDENSER WATER PUMP, OIL PUMP AND SYSTEM. PROVIDE ELAPSED
176) TIME METER AND STARTS COUNTER.
- 4 177) CAPABILITY OF INTERFACING WITH TYPICAL BUILDING ENERGY MANAGEMENT
178) SYSTEMS (DIRECT CURRENT LOAD SHED SIGNALS) TO REDUCE TOTAL
179) ELECTRICAL PEAK DEMAND.
- 4 180) CAPACITY CONTROL MECHANISM WHICH PROVIDES UNLOADED START-UP.
- 2 181) EACH UNIT SHALL BE FACTORY ANTI-SWEAT INSULATED WITH FLEXIBLE CLOSED CELL
182) INSULATION. INSULATION SHALL BE APPLIED TO THE COOLER PORTION OF THE
183) SHELL AT MINIMUM THICKNESS 3/4 INCH. THE SAME TYPE INSULATION SHALL BE
184) APPLIED TO COMPRESSOR SUCTION PIPING AND OTHER REFRIGERANT PIPING AS
185) NECESSARY.
- 2 186) THE UNIT MANUFACTURER SHALL FURNISH THE COMPLETE INITIAL CHARGE OF
187) REFRIGERANT AND LUBRICATING OIL, CHILLED WATER AND CONDENSER WATER FLOW
188) SWITCHES, AND FOUR VIBRATION ISOLATION MOUNTS CONSISTING OF 5/8 INCH
189) STEEL MOUNTING PLATES WITH 1 INCH THICK NEOPRENE ISOLATION PADS.
- 2 190) REMOTE MOUNTED STARTERS
- 3 191) COMPRESSOR MOTOR STARTER SHALL BE SUPPLIED BY THE CENTRIFUGAL CHILLER
192) MANUFACTURER. STARTER SHALL BE A 5 KV PRIMARY REACTOR TYPE ENCLOSED IN
193) A FREE STANDING NEMA-1 ENCLOSURE.
- 3 194) THE STARTER PANEL DOOR SHALL BE HINGED AND SHALL BE CAPABLE OF BEING
195) PADLOCKED TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL.
- 3 196) THE AMBIENT TEMPERATURE INSIDE THE STARTER PANEL SHALL NOT EXCEED 155
197) DEG. F (67 DEG. C) WITH ALL COMPONENTS ENERGIZED AT RATED LOAD
198) CONDITIONS AND 104 DEG. F (40 DEG. C) AMBIENT OUTSIDE THE STARTER
199) PANEL. TEMPERATURE RISE OF COMPONENTS SHALL BE PER RELATED NEC, NEMA
200) AND UL CODES.
- 3 201) A PERMANENT NAMEPLATE SHALL BE PROVIDED AND MOUNTED ON THE STARTER
202) PANEL. IT SHALL IDENTIFY THE MANUFACTURER, SERIAL OR MODEL NUMBER
203) IDENTIFYING THE DATE OF MANUFACTURE AND COMPONENT REPLACEMENT PARTS
204) AND ALL CURRENT AND VOLTAGE RATINGS.

- 4 205) THE OVERLOAD SYSTEM, CONSISTING OF ANSI NO. 50 INSTANTANEOUS
206) OVERCURRENT OR RATE OF RISE RELAYS, SHALL BE COORDINATED WITH THE
207) COMPRESSOR MOTOR AND FACTORY SET AND LABELED WITH THE COMPRESSOR
208) MOTOR RATED LOAD AMPS (RLA), LOCKED ROTOR AMPS (LRA) AND OVERLOAD
209) TRIP (OLT) SETTINGS, AND SHALL PROVIDE:
- 5 210) EXCESSIVE LOCKED ROTOR TIME PROTECTION.
- 5 211) CURRENT CONTROL OF TRANSITION FROM START TO RUN CONFIGURATION.
- 5 212) MAXIMUM CURRENT PROTECTION TO PREVENT THE COMPRESSOR MOTOR FROM
213) EXCEEDING ITS OLT SETTING.
- 5 214) PROTECTION OF EQUIPMENT AGAINST TRANSITION RESISTOR FAILURE.
- 5 215) A FAULT TRIP INDICATOR, "MOTOR OVERLOAD" SHALL BE LOCATED IN
216) THE DOOR OF THE STARTER PANEL ENCLOSURE. THIS FAULT INDICATOR
217) SHALL BE DISPLAYED IF ANY OF THE ABOVE CONDITIONS ARE SENSED AND
218) SHALL CAUSE THE MACHINE TO BE SHUT DOWN. THIS FAULT SHALL
219) REQUIRE MANUAL RESET. ELECTRONIC DIGITAL TIMING SHALL BE
220) PROVIDED BY THE OVERLOAD SYSTEM FOR REPEATABILITY AND ACCURACY.
221) A NORMALLY CLOSED ALARM CONTACT SHALL BE PROVIDED FOR REMOTE
222) ANNUNCIATION OF ANY OF THE ABOVE CONDITIONS.
- 4 223) THE THREE-PHASE OVERLOAD SYSTEM SHALL BE FIELD SET FOR PURPOSES OF
224) COORDINATION WITH OTHER ELECTRICAL PROTECTION DEVICES.
- 3 225) TO PREVENT THE INCREASINGLY COMMON RAPID RECLOSURE FEATURE OF UTILITY
226) POWER DISTRIBUTION SYSTEMS FROM ADVERSELY AFFECTING THE MECHANICAL AND
227) POWER DRIVE EQUIPMENT, DISTRIBUTION FAULT PROTECTION SHALL BE
228) PROVIDED.
- 4 229) THE DISTRIBUTION FAULT PROTECTION SHALL CONSIST OF THREE-PHASE
230) CURRENT SENSING AND MONITORING THE STATUS OF THE STARTER. IF A
231) DISTRIBUTION FAULT IS DETECTED, THE FAULT TRIP INDICATOR
232) "DISTRIBUTION FAULT" SHALL BE DISPLAYED AND MANUAL RESET SHALL BE
233) REQUIRED. DISTRIBUTION FAULTS OF 1-1/2 ELECTRICAL CYCLES DURATION
234) SHALL BE DETECTED AND THE COMPRESSOR MOTOR SHALL BE DISCONNECTED
235) WITHIN SIX ELECTRICAL CYCLES.
- 3 236) DIFFERENTIAL PROTECTION
- 4 237) ALL MOTOR ARMATURE LEADS SHALL BE EXTENDED FOR THE APPLICATION OF
238) DIFFERENTIAL RELAYING PROTECTION. PROVIDE SIX CURRENT TRANSFORMERS
239) (MATCHED) AND THREE DIFFERENTIAL RELAYS (ANSI NO. 87).
- 3 240) POWER SUPPLY TERMINALS SHALL BE IDENTIFIED BY PERMANENT MARKERS. THE
241) MAXIMUM TEMPERATURE OF TERMINALS SHALL NOT EXCEED 167 DEG. F (75 DEG.
242) C) WHEN THE EQUIPMENT IS TESTED IN ACCORDANCE WITH ITS RATING.
- 3 243) CONTACTORS SHALL BE UL RECOGNIZED FOR AIR CONDITIONING AND
244) REFRIGERATION (DEFINITE PURPOSE) USE. THEY SHALL BE RATED IN VOLTAGE,
245) CONTINUOUS RATED LOAD AMPERES (RLA) AND LOCKED ROTOR AMPERES (LRA).
246) THE RATING SHALL EQUAL TO OR GREATER THAN THE REQUIREMENTS SPECIFIED
247) ON THE COMPRESSOR MOTOR NAMEPLATE.
- 3 248) ALL WIRES, BUS BARS AND FITTINGS SHALL BE COPPER ONLY, EXCEPT THE
249) INTERNAL WIRE OF THE CONTROL TRANSFORMER WHICH MAY BE ALUMINUM IF
250) COPPER TERMINATION IS PROVIDED.
- 3 251) DISCONNECTING MEANS IN THE FORM OF A NON-LOAD BREAK, HIGH INTERRUPTING
252) CAPACITY (34,000 AMPS RMS SYMMETRICAL), FUSED DISCONNECT SHALL BE
253) PROVIDED FOR SHORT CIRCUIT PROTECTION.
- 3 254) A 120-VOLT SINGLE-PHASE POWER SUPPLY SHALL BE DEVELOPED WITHIN THE
255) THREE-PHASE COMPRESSOR MOTOR STARTER AND SHALL BE IN ACCORDANCE WITH
256) THE CHILLER MANUFACTURER'S SPECIFICATIONS. A METALLIC SEPARATOR SHALL
257) BE PROVIDED BETWEEN THE HIGH AND LOW VOLTAGE SYSTEMS SECTIONS.

258) THE STARTER SHALL BE EQUIPPED WITH TWO "PILOT" RELAYS TO INITIATE
259) THE MAIN CENTRIFUGAL STARTER SEQUENCE. THESE RELAYS SHALL BE A
260) SELF-MONITORING SAFETY CIRCUIT WHICH SHALL INDICATE IMPROPER OPERATION
261) (SLOW OPERATION, WELDING OF CONTACTS, ETC.) AND SHALL CAUSE THE UNIT
262) TO BE SHUT DOWN AND A FAULT TRIP INDICATOR TO BE DISPLAYED. THE
263) "STARTER CIRCUIT FAULT" INDICATOR SHALL BE LOCATED IN THE DOOR OF
264) THE ENCLOSURE AND SHALL REQUIRE MANUFAL RESET.

265) A LOCKOUT TRANSITION SAFETY CIRCUIT SHALL BE PROVIDED TO PREVENT
266) DAMAGE FROM PROLONGED ENERGIZATION DUE TO MALFUNCTION OF THE
267) TRANSITION CONTACTOR. MALFUNCTION SHALL CAUSE THE MACHINE TO BE SHUT
268) DOWN AND THE "STARTER CIRCUIT FAULT" INDICATOR TO BE DISPLAYED.

269) THE THREE-PHASE OVERLOAD SYSTEM SHALL PROVIDE PROTECTION TO THE
270) COMPRESSOR MOTOR.

271) TERMINAL CONNECTION PADS SHALL BE PROVIDED TO WHICH CUSTOMER APPLIED
272) LUGS CAN BE ATTACHED. PROVIDE SUFFICIENT SPACE FOR STRESS CONE
273) TERMINATION.

274) PROVIDE THREE (3) AMMETERS CALIBRATED FOR INDICATING INRUSH CURRENT.

275) A GROUND FAULT RELAY (ANSI NO. 64) SHALL OPEN STARTER CONTACTS WHEN
276) THE DIELECTRIC RESISTANCE IS SIGNIFICANTLY REDUCED IN EITHER THE
277) STARTER OR COMPRESSOR MOTOR. INDICATION AND RESET SHALL BE LOCATED IN
278) THE STARTER DOOR.

279) CAPACITY

280) EACH OF THE FIVE UNITS SHALL HAVE A CAPACITY OF 1600 TONS OF
281) REFRIGERATION, DELIVERING 2400 GPM OF CHILLED WATER COOLED FROM 58 DEG
282) F. TO 42 DEG F. WHEN SUPPLIED WITH 4800 GPM OF CONDENSER WATER AT 85
283) DEG F. WITH A 10 DEG F. TEMPERATURE RISE.

284) WATER TUBE VELOCITY THRU THE CONDENSER AND THE CHILLER SHALL NOT
285) EXCEED 10 FPS.

286) CONDENSER AND CHILLER SIDE FOULING FACTORS SHALL BE .0005.

287) FACTORY TESTS

288) A FACTORY TEST OF EACH MACHINE SHALL INCLUDE THE FOLLOWING:

289) HYDROSTATIC STRENGTH TEST AND REFRIGERANT LEAK TEST OF COMPRESSOR
290) CASING.

291) AIR PRESSURE STRENGTH TEST AND REFRIGERANT LEAK TEST ON BOTH THE
292) SHELL AND TUBE SIDES OF THE CONDENSER, EVAPORATOR, INTER COOLER AND
293) PUMPOUT RECEIVER (WHERE APPLICABLE).

294) START-UP SERVICE

295) MANUFACTURER SHALL FURNISH A FACTORY-TRAINED SERVICE ENGINEER DURING
296) THE START-UP PERIOD OF EACH MACHINE. THE SERVICE ENGINEER SHALL
297) PERFORM LEAK TESTING, EVACUATION AND DEHYDRATION USING A HIGH VACUUM
298) PUMP FURNISHED BY THE MANUFACTURER, CHARGING THE UNIT, START-UP AND
299) INSTRUCTION OF GOVERNMENT'S PERSONNEL ON OPERATION AND MAINTENANCE.
300) START-UP SHALL BE PERFORMED BY THE MANUFACTURE'S SERVICE ENGINEER;
301) SUPERVISION OF CONTRACTOR PERSONNEL PERFORMING THE START-UP WORK, IS
302) NOT ACCEPTABLE. MANUFACTURER SHALL PROVIDE OPERATING INSTRUCTIONS AND
303) PARTS LIST. REFER TO SPECIAL CONDITIONS. THE COST OF THIS START-UP
304) SERVICE SHALL BE INCLUDED IN THE MANUFACTURER'S BID PRICE.

305) THE MANUFACTURER SHALL PROVIDE THE GOVERNMENT EXTRA REFRIGANT AND OIL
306) OF A SUFFICIENT QUANTITY TO COMPLETELY RE-CHARGE ONE MACHINE.

307) THE MANUFACTURER SHALL PROVIDE THE GOVERNMENT WITH COOLER AND
308) CONDENSER TUBE BRUSHES.

***END OF SECTION